Timing It: Managing your Bees for Optimal Health
AND Maximum Honey Production

Harry, the Time Turner will solve all our problems!
You really mean we can have healthy bees and still get some honey??

Prepared by Landi Simone
EAS Master Beekeeper
Gooserock Farm
Factors Determining Your Bees’ Ability to Bring in a Honey Crop

- The number of bees in the colony.
- The proportion of foragers to nurse bees.
- The age and vigor of the queen.
- The health of the colony.
- The weather.
- The location of the apiary and proximity of nectar sources.

Think about which of these we are able to control.
The biggest factor influencing the health of our bees is the level of Varroa mites.

And this is something we can, to a degree, control.
Bees with Mites:

- Do not live as long as healthy bees.
- Are vulnerable to many, many damaging viruses.
- Are more vulnerable to Nosema disease.
- Do not grow as quickly or build up as much as healthy bees.
- Because their populations are smaller, do not make as much honey as healthy bees.
- Sometimes abscond if mite loads are very high.
- Rarely survive the winter.
# A Look at Available Mite Treatments

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Apivar</th>
<th>Apiguard</th>
<th>Apilife Var</th>
<th>MAQS</th>
<th>Oxalic Acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficacy</td>
<td>99%</td>
<td>85-95%</td>
<td>95%</td>
<td>About 95%</td>
<td>95%?</td>
</tr>
<tr>
<td>Temp. Range</td>
<td>No limits</td>
<td>59º-100º</td>
<td>60º-70º</td>
<td>50º-85º</td>
<td>Depends on Method</td>
</tr>
<tr>
<td>Length of Treatment</td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>26-32 days</td>
<td>1 week</td>
<td>Depends on Season</td>
</tr>
<tr>
<td>Hard on Bees?</td>
<td>No</td>
<td>Yes at high temps.</td>
<td>&gt;90º kills bees</td>
<td>Yes at high temps.</td>
<td>Yes using dribble</td>
</tr>
<tr>
<td>Hard on Beekeeper?</td>
<td>No</td>
<td>Minor danger</td>
<td>Minor danger</td>
<td>Yes. Strong acid</td>
<td>Very using vaporization</td>
</tr>
<tr>
<td># of Visits</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1 in winter; 3 w/ brood</td>
</tr>
<tr>
<td>Wait Time Before Supers</td>
<td>2 weeks. (Tests show low residues.)</td>
<td>0</td>
<td>4 weeks</td>
<td>Can use with supers on hives</td>
<td>0 but must remove supers</td>
</tr>
<tr>
<td>Notes</td>
<td>Consistently effective</td>
<td>Need shim. Temp. sensitive</td>
<td>Temperature sensitive</td>
<td>Temperature sensitive</td>
<td>Many ?s</td>
</tr>
</tbody>
</table>
# A Look at Available Mite Treatments

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<tr>
<th>Treatment</th>
<th>Oxalic Acid Dribble</th>
<th>Oxalic Acid Vaporization</th>
<th>Hopguard II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Efficacy</strong></td>
<td>90%</td>
<td>95%</td>
<td>About 85% but many ?s</td>
</tr>
<tr>
<td><strong>Temp. Range</strong></td>
<td>No limit but winter hive opening problematic</td>
<td>&gt;37º F</td>
<td>No limit</td>
</tr>
<tr>
<td><strong>Length of Treatment</strong></td>
<td>Instantaneous</td>
<td>Instantaneous</td>
<td>14 days</td>
</tr>
<tr>
<td><strong>Hard on Bees?</strong></td>
<td>YES!!!!!</td>
<td>Probably not. (May burn chitin?)</td>
<td>No</td>
</tr>
<tr>
<td><strong>Hard on Beekeeper?</strong></td>
<td>No.</td>
<td>Yes. Respirator and goggles essential.</td>
<td>No</td>
</tr>
<tr>
<td><strong># of Visits</strong></td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Wait Time Before Supers</strong></td>
<td>None</td>
<td>None</td>
<td>None. Can be used with supers on.</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Bees must be broodless. Winter treatment. Only kills phoretic</td>
<td>3 treatments 5 days apart with brood present. Only kills</td>
<td>Only kills phoretic</td>
</tr>
</tbody>
</table>
Timing of Northern NJ Surplus Nectar Flows

- **Autumn olive**: May 7-May 21
- **Black Locust**: May 15-May 31
- **Linden/Basswood**: June 1-July 15
- **Clovers**: June 1-July 7
- **Summer wildflowers**: smartweed, knapweed: August 15-October 15
- **Japanese Bamboo**: August 15-September 7
- **Goldenrod (elm-leaved, rough-leaved)**: September 1-October 15
  Note: Early goldenrod blooms August 1 but does NOT produce a surplus and the bees rarely work it at all.

Photo: Gooserock Farm
In this area, an average year has:

May 1 – July 15: Honey
July 15 – August 31: Dearth
September 1-October 1: Honey (sometimes)

Bees in lowlands may also get Japanese bamboo and/or smartweed starting August 15.
Windows of Opportunity

• Opportunities to make a honey crop:
  • May 1 – July 15
  • September 1-October 1
  • (Some spots: August 15-October 1)

• Opportunities to destroy Varroa mites:
  • BEFORE May 1 (March 1-May 1)
  • July 15-September 1 OR
  • July 15-August 15 (some spots)
These dates vary from year to year and location to location!
Each beekeeper must observe and identify the major nectar flows in his or her own apiaries!
Varroa Treatment Considerations

- Twenty years ago, a single treatment in summer was adequate to control mite levels.

- Today, most successful beekeepers focusing on honey production treat two or even three times a year.

- Checking mite levels post-treatment is critical. The bees may have moved away from the miticide or robbed out a collapsing colony and become re-infested.

Photo: Kevin Inglis, NWNJBA
One Possible Schedule

- **March 1:** Check to see if bees are alive. Give sugar or fondant if needed. Put two Apivar strips in top box with brood.

- **March 14-21:** Check position of strips and move into brood nest if needed.

- **April 1:** Reverse supers. Check position of strips.

- **April 15:** Remove Apivar strips. Do alcohol wash.

- **May 1:** Add honey supers. Check to be sure brood and cluster are in lower boxes and have adequate drawn comb. Reverse again if needed.
One Possible Schedule, cont.

- **May 1-July 15:** Cheer your bees on while they make honey!

- **July 15:** Pull honey supers. Do alcohol wash. Add shims and Apiguard. Begin feeding bees.

- **July 29:** Put second Apiguard dose on bees.

- **August 12:** Remove any remaining Apiguard and shims. Do alcohol wash.

- **September 1:** Add honey supers.
One Possible Schedule, cont.

- **September 1-October 15:** Cheer some more while your bees bring in a fall crop! Add mouse guards.

- **October 15:** Pull honey supers. Check weight of hives. Feed some more if needed. Do an alcohol wash. Add ventilation shims and reverse inner covers.

- **2017 Update:** This year I plan to give a fall treatment to guard against reinfestation by robbing of collapsing infested colonies. I will likely need to pull honey supers at the end of September to do this. If mite levels are high in mid-September and bees are still producing honey, we’ll use MAQS to knock down the mites and, after removing honey, add Apivar for additional protection.

**All year long:** Thank your bees for the privilege of caring for such amazing, fascinating creatures.
And remember that you must also be checking for brood and adult bee health, queen vigor, swarm cells, etc.
Possible Schedule #2: Apiary near Japanese Bamboo

March 1-July 15 is the Same as the First Schedule, then:

- Sometime between July 15 and August 15: Check weather forecast and, when temperatures are predicted to be in the low 80º’s for three consecutive days, close off screened bottom and add MAQS pads. Remove **ONE WEEK** later.

- On Removal of MAQS: Do alcohol wash. (If above 2%, repeat MAQS treatment.)

- **August 15:** Add honey supers

- **October 15:** Pull supers and proceed as before with fall management.
Mite-Away Quick Strips (MAQS) Application

Photo: BrookfieldFarmHoney.wordpress.com
Options for Early Fall/Late Summer Flows

- Both Apiguard and Apilife Var take approximately 4 weeks. HOWEVER, ApilifeVar has a 30 day waiting period before it is permissible to add honey supers.

- Apiguard has no waiting period between treatment and supering. That makes it a good option for summer treatment in cases where the treatment window is July 15 to August 15.
Apilife Var

What sometimes happens in the shim.

Apiguard

Photo: Paynesbeefarm.co.uk

Photo: CoronaApicultores.blogspot.com

Photo: Mendip-Apiary.co.uk
MAQS is the only treatment that can be used with supers on.

This makes it extremely versatile and useful if a post-treatment alcohol wash shows unacceptable mite levels and you decide additional treatment is needed during a honey flow.
Why Feed While Treating for Mites?

- If treating for mites during the summer dearth, feeding does several very important things:
  - **It stimulates the queens to lay.** Because you are eliminating the mites with the treatment, the brood the queen lays is healthy and non-parasitized. These will be your winter bees that must survive the 5 months to next spring. Bees that have had mites feeding from them only live 20% to 80% as long as non-parasitized bees.
  - **It fills the hive with food.** When you remove the strips and add honey supers, the bees will use the nectar to make a surplus for you to harvest as the brood nest will already be full of capped honey.
  - **It insures your bees will have plenty of food for winter.** Fall flows are unreliable in our area. Feeding early eliminates gambling that you can get them heavy before cold weather sets in.
Best Feeding Method in Dearth: Barrel (Open) Feeding
About Open Feeding

- MUST have a suitable location, away from people, and at least 100 yards from the bees.
- Eliminates robbing. The bees view the feeding station as a nectar source. (“Hey, Petunia! Check out these big weird-looking white flowers!”)
- Can bulk up hives very quickly, with little work.
- NOT suitable in urban or densely populated suburban settings.
If You Cannot Open Feed, Use a Different Method, But...

- Be sure your equipment is in good repair, with no cracks.
- Reduce entrances of weaker colonies.
- Always feed ALL HIVES in the yard. Feeding only some (the weaker ones) encourages robbing by the stronger colonies.
- Don’t spill syrup, leave hives open, or engage in other behaviors that encourage robbing.

Photo: afb.org.nz
When the fall flows begin…

- First check your hives to be sure they have at least 60# of honey stored in the brood nest.
- ONLY super hives that are heavy and ready to winter.
- Any hives that are still light will bulk up on the fall flow. Consider feeding light colonies individually. Robbing will not be an issue as long as the flows last.
Harvesting Delicious Northern NJ Honey
May You and Your Bees Live Long and Prosper!

Thank you.